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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/806,271

03/22/2004

Oliver Hurst-Hiller

MSFT-2826/306403.01

1946

41505

7590

08/24/2009

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CIRA CENTRE, 12TH FLOOR

2929 ARCH STREET

PHILADELPHIA, PA 19104-2891

EXAMINER

FERNANDEZ RIVAS, OMAR F

ART UNIT

PAPER NUMBER

2129

MAIL DATE

DELIVERY MODE

08/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/806,271	Applicant(s) HURST-HILLER ET AL.	
	Examiner OMAR F. FERNANDEZ RIVAS	Art Unit 2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8, 10-17, 25 and 27-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 10-17, 25 and 27-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to an RCE entered on 7/13/2009.
2. The Office Actions of February 13, 2009, September 23, 2008, April 30, 2008, August 3, 2007, December 1, 2006 and June 2, 2006 are incorporated into this Non-Final Office Action by reference.

Status of Claims

3. Claims 1, 10 and 25 have been amended. Claims 7, 9, 18-24 and 26 have been previously cancelled. Claims 1-6, 8, 10-17, 25 and 27-29 are pending on this application.

Claim Objections

4. Claims 1, 10 and 25 are objected to because of the following informalities:

Claim 1

The claim does not have an ending period. The claim also recites "...to determine a satisfaction value for the **user's** with the query that indicates the satisfaction of the **user's** with the search results..." in lines 10-11. It seems as if it should read "...to determine a satisfaction value for the **user** with the query that indicates the satisfaction of the **user** with the search results...", since the claim is directed to a single user.

Claim 10

The claim recites: "...the stored interaction of multiple **user's** with the search results..." in lines 6-7. The claim should read "...the stored interaction of multiple **users** with the search results...". In line 12, the claim recites: "...after receipt by a **user's** of the search results..." The claim should read "...after receipt by a **user** of the search results...". The claim is also missing an ending period.

Claim 25

Claim 25 objected to because of the following informalities: the reply filed on July 13, 2009 is not fully responsive to 37 CFR §1.121 because the current status of the claim is presented as "Previously presented" when it should be "Currently Amended" since changes have been made to the claim. Line 5 recites: "...storing interaction of **user's** with the search results...". The claim should read "...storing interaction of **users** with the search results..." It is noted that there are other instances where **user's** is used in the claim (see lines 9 and 13). These should be revised and corrected as appropriate.

Appropriate correction is required,

Claim Rejections - 35 USC § 112

5. In light of the amendments made, the rejection under 35 USC 112 of the previous Office Action is withdrawn.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-6, 8, 10-17, 25 and 27-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are two separate requirements set forth in this paragraph:

(A) the claims must set forth the subject matter that applicants regard as their invention; and

(B) the claims must particularly point out and distinctly define the metes and bounds of the subject matter that will be protected by the patent grant.

The first requirement is a subjective one because it is dependent on what the applicants for a patent regard as their invention. The second requirement is an objective one because it is not dependent on the views of applicant or any particular individual, but is evaluated in the context of whether the claim is definite — i.e., whether the scope of the claim is clear to a hypothetical person possessing the ordinary level of skill in the pertinent art.

Claims are not just words listing out invention elements...they are limitations that define the fundamental claim scope. Although an essential purpose of the examination

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process is to determine whether or not the claims define an invention that is both novel and nonobvious over the prior art, another essential purpose of patent examination is to determine whether or not the claims are precise, clear, correct, and unambiguous. The uncertainties of claim scope should be removed, as much as possible, during the examination process.

Claim 1 recites: "...the stored interaction of multiple user with the search result..." in line 6. There is insufficient antecedent basis for this limitation in the claim since line 4 suggests storing interaction of a single user.

Claim 1 recites "the context-based user behavior data acquired after receipt by a user of **the search results of said application** of said predictive pattern model **further comprises** isolating a set of said performed queries which are unsatisfactory and which share a common characteristic in order to identify problems which appear for multiple users or queries". However, the predictive pattern model is applied to determine a satisfaction of the user with the search results, not to obtain the search results, if this is what is being intended by this limitation. It is also not clear what the phrase "further comprises" is supposed to modify, is it acquiring the context-based user behavior data, obtaining the search results or applying the predictive pattern model? The intent of these limitations in the claim is not clear and a person of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claims 2-6, 8 and 27-29 further limit claim 1 but fail to cure the deficiencies set forth above and are rejected on the same basis.

Claims 10-17 recite limitations similar to those of claims 1-6, 8 and 27-29 and are rejected on the same basis.

Claim 25 recites limitations similar to those of claim 1 and is rejected on the same basis.

Claim Rejections - 35 USC § 101

8. In light of the amendments made, the rejection under 35 USC 101 has been withdrawn.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8, 10-17, 25 and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Biebesheimer et al. (US Patent Application Publication #2002/0152190, referred to as **Biebesheimer**).

Claims 1, 10 and 25

Biebesheimer anticipates a method for obtaining predicted user satisfaction data (not further defined) regarding the performance of a search mechanism which provides search results in response to user queries (**Biebesheimer**: abstract, L1-26; page 2,

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pars 16-20; page 3, par 30; page 5, pars 42-44; Examiner's Note (EN): item 16 applies. Obtaining a response set based on relevancy to the user's query is obtaining predicted user satisfaction data. Moreover, the indexing function determines the value of the search results (the response set) for a user in their context. Also note the weighting function (user satisfaction) of the Adaptive Indexing), comprising: storing interaction of the user with the search results obtained in response to a query (**Biebesheimer**: pg. 2, pars 13-20; pg. 3, par 32; pg. 4, par 37; pgs. 4-5, pars 41-44; pg. 6, pars 50-51; pg. 9, par 73; pg. 12, claims 5, 7; pg. 13, claim 24; Figs. 1 and 6; EN: item 16 applies. The user's interaction records include resources chosen or rejected by the user from the list displayed); determining **at least one** predictive pattern model for predicting user satisfaction with the search results from the stored interaction of the user with the search results (**Biebesheimer**: pg. 2, pars 13-20; pg. 3, par 32; pg. 4, par 37; pgs. 4-5, pars 41-45; pg. 6, pars 50-51; pg. 9, par 73; pg. 12, claims 5, 7; pg. 13, claim 24; Figs. 1 and 6; EN: item 16 applies. The resource indexing functions are predictive pattern models. Note that each function predicts a response set that the user eventually selected (user satisfaction)); storing the **at least one** predictive pattern model (**Biebesheimer**: pg. 2, pars 13-20; pg. 3, par 32; pg. 4, pars 37-38; pgs. 4-5, pars 41-45; pg. 6, pars 50-51; pg. 9, par 73; Figs. 1 and 6) and applying said predictive pattern model to context-based user behavior data to determine a satisfaction value for the **user's** with the query that indicates the satisfaction of the **user's** with the search results of said application of said predictive pattern model further comprises isolating a set of said performed queries which are unsatisfactory and which share a common

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characteristic in order to identify problems which appear for multiple users or queries (**Biebesheimer**: pg. 2, pars 13-20; pg. 3, par 32; pgs. 4-5, pars 37-45; pgs. 5-6, pars 48-51; pg. 9, pars 72-73; Figs. 1 and 6; EN: the term **user's** is read as **user** since the claim is directed to the actions of a user. The adaptive indexing function uses an evaluation metric (such as the coverage of the resources eventually selected by a user given a query/context pair) from the user's feedback to optimize the indexing functions to maximize the number of successful retrievals. Note that the user interaction records include traces of previous interactions with **users** of the system. The exclusionary filters isolate unsatisfactory search queries. It is also noted that "characteristic" has not been further defined, therefore any characteristic such as being rejected by the user reads on this characteristic).

Claims 2 and 11

Biebesheimer anticipates storing at least one predictive pattern model comprises utilizing data mining techniques (not further defined) to determine at least one predictive pattern for user satisfaction (**Biebesheimer**: page 5, par 43-44; EN: supervised learning is a data mining technique).

Claims 3 and 12

Biebesheimer anticipates said context-based user behavior data comprises explicit user feedback data (**Biebesheimer**: pages 4 and 5, par 41; page 6, pars 49-50; page 7, par 64, L1-12; page 8, pars 66-67; EN: obtaining data from the user defining the

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query is explicit user feedback as defined in page 2, par 17 of the present application).

Claims 4 and 13

Biebesheimer anticipates said context-based user behavior data comprises implicit user feedback data (**Biebesheimer**: page 2, par 19, L6-22; page 5, par 41, L7-25; page 6, par 50; EN: user interactions is user behavior data; the selections made by the user are implicit feedback as defined in page 2, par 17 of the present application).

Claims 5 and 14

Biebesheimer anticipates said context-based user behavior data is selected from the group comprising: user navigation to a new page using a hyperlink; user navigation to a new page using a history list; user navigation to a new page using an address bar; user navigation to a new page using a favorites list; user scrolling behavior; user document printing behavior; user adding a document to said favorites list; user switching focus to a different application; user switching focus back from a different application; user closing a window; user dwell time behavior; user initiation of a new query; sequences of user behaviors; and user inactivity without switching focus from a window relating to said performed query (**Biebesheimer**: page 3, pars 30-32; page 5, par 41, L7-17; pg. 6, pars 49-50; pg. 9, pars. 72-73; EN: redefining a query is initiating a new query, user interactions is a sequence of user behavior).

Claims 6 and 15

Biebesheimer anticipates said application of said predictive pattern model yields predicted user satisfaction data regarding said search mechanism (**Biebesheimer**: page 2, par 19; page 4, par 37; EN: the Adaptive Indexing algorithm applies the predictive pattern. Maximizing the number of successful retrievals by improving the resource indexing functions is yielding predicted user satisfaction data regarding the search mechanism. Also note that the indexing function retrieves the response set most relevant to the user), and where said method further comprises: displaying said predicted user satisfaction data (**Biebesheimer**: page 6, par 49; page 9, par 73; EN: the ordered response set is predicted user satisfaction data).

Claims 8 and 17

Biebesheimer anticipates said context-based user behavior data comprises a testing set of context-based user behavior data (**Biebesheimer**: page 3, par 33, L1-14; EN: item 16 applies. The minimal user context vector is a testing set of context based user behavior).

Claim 27

Biebesheimer anticipates isolating problematic queries based on the predicted user satisfaction data (**Biebesheimer**: page 2, par 19, L6-22; page 5, pars 43.and 44).

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Claim 28

Biebesheimer anticipates generating a summary of measured satisfaction based on the predicted user satisfaction data (**Biebesheimer**: page 5, par 45, L9-23; pg. 6, pars 50-51; pg. 9, par 73; EN: generating a response set based on the scoring or relevance (satisfaction data) to the user's query).

Claim 29

Biebesheimer anticipates monitoring a search mechanism responsive to the predicted user satisfaction data (**Biebesheimer**: page 2, par 19; page 4, par 37; page 5, pars 42-44; pg. 6, pars 50-51; pg. 9, par 73; Fig. 1; EN: item 16 applies. If the system is learning, then some monitoring is taking place).

Response to Applicant's arguments

10. The Applicant's arguments regarding the rejection under 35 USC 102 have been fully considered but are not persuasive.

In reference to Applicant's arguments:

As amended, claims 1, 10 and 25 recite an examination of queries suffering from low user satisfaction that include specific characteristics or a group of characteristics. By grouping the user satisfaction data according to specific characteristics (e.g., queries from a specific country), identification of problems which may appear sporadically over a **number of users** or queries can be identified and addressed.

The Biebesheimer reference teaches that the Adaptive Indexing Function is a supervised learning algorithm that does not teach the isolation of problematic search terms of multiple users in order to improve the quality of searches. Biebesheimer's Adaptive Indexing Function implementation is based on **a single user's data**. A single user's "Historical User Interaction Record" is used to refine the search quality **for the same user only**. The Historical User Interaction Record includes a users' prior queries, responses and interactions with the system. (Paragraph [0032]). The Adaptive Indexing Function makes inferences and draws conclusions regarding the individual user's preferred resource characteristics. Id. A specific instance of the Resource Indexing Function or user defined search engine is improved by the Adaptive Indexing Function and associated in a database directly with the individual user. Therefore, the individual user associated with the specific instance of the Resource Indexing Function will benefit from the supervised learning algorithm.

Examiner's Response:

The claims and only the claims form the metes and bounds of the invention. The Examiner has full latitude to interpret each claim in the broadest reasonable sense. The characteristics have not been defined in the claim as to mean anything in particular and could therefore be anything. As described by Biebesheimer, the User interaction Records include traces of previous interactions with **users** of the system. It also includes context information which includes organizational, community and environmental context. Also note that the User Interaction Record includes data for a user or **user group**.

As for the argument that the Adaptive indexing functions are implemented for a single user, it is noted that claims 1, 10 and 25 are also directed to receiving data from a single user. There is no limitation in the claim of “the isolation of problematic search terms of multiple users”. Nothing in the claim suggests that results of queries made from multiple users is received and compared to the query of the current user. Simply stated, nothing in the claim recites that data from multiple users is used in the system and as such it is directed to the actions of a single user.

In reference to Applicant’s arguments:

Further, the exclusionary filters described in the office action which isolate unsatisfactory search queries apply to the single individual user, making no improvement in the search experience of other search engine users. The Adaptive Indexing Function cannot identify problematic searches which appear sporadically over a large number of users because it is directed at improving a single user's search results. For example, the same search performed by multiple users will not be improved by the Adaptive Indexing Function even the Adaptive Indexing Function was applied to the search through an individual users interaction.

Examiner’s response:

As stated above, the claim does not suggest that multiple users are evaluated or even that data from multiple users is being processed. As such, the claim is directed to improving the search for a single user.

Examination Considerations/Comments

11. The Applicant is advised to review the claims and amend to clearly define the invention. Specifically and as stated in the remarks on page 7 “as amended the claims more clearly articulate **the use of feedback data from multiple users** to isolate queries which are unsatisfactory. Feedback data is used from multiple users for the purpose of determining the satisfaction value of the user. This data is examined to determine if a user, a group of users or **queries with a specific characteristic or set of characteristics suffer from a lower user satisfaction value than users do in general. The data is used comparatively to determine if any user, group of users or queries satisfaction is out of line with the average user satisfaction value**” The claims do not clearly describe these features and especially the feedback data from multiple users.

12. Examiner has cited particular columns and line numbers (or paragraphs) in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the Applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. The entire reference is considered to provide disclosure relating to the claimed invention.

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13. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 105455, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. In re Prater, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

14. Examiner's Notes are provided with the cited references to prior art to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and spirit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but a link to prior art that one of ordinary skill in the art would find inherently appropriate.

15. Unless otherwise annotated, Examiner's statements are to be interpreted in reference to that of one of ordinary skill in the art. Statements made in reference to the condition of the disclosure constitute, on the face of it, the basis and such would be obvious to one of ordinary skill in the art, establishing thereby an inherent prima facie statement.

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16. Examiner's Opinion: items 13-15 apply. The claims and only the claims form the metes and bounds of the invention. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Kay et al., US PG PUB #2003/0018626
- b. Rebane US PG PUB #2003/0130983
- c. Cheung et al., US PG PUB #2004/0054661
- d. Chen et al., US PG PUB #2004/0111397

18. Claims 1-6, 8, 10-17, 25 and 27-29 are rejected.

Correspondence Information

19. Any inquires concerning this communication or earlier communications from the examiner should be directed to Omar F. Fernández Rivas, who may be reached Monday through Friday, between 7:00 a.m. and 4:00 p.m. EST. or via telephone at (571) 272-2589 or email omar.fernandezrivas@uspto.gov.

If you need to send an Official facsimile transmission, please send it to (571) 273-2589.

If attempts to reach the examiner are unsuccessful the Examiner's Supervisor, David Vincent, may be reached at (571) 272-3080.

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Hand-delivered responses should be delivered to the Receptionist @ (Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located on the first floor of the south side of the Randolph Building.

/Omar F. Fernández Rivas/

Examiner, Art Unit 2129

Thursday, August 20, 2009.

/David R Vincent/

Supervisory Patent Examiner, Art Unit 2129